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UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Steven M. Blumenau, et al.
Serial No: 09/107,684
Filed: June 30, 1998
For: METHOD AND APPARATUS FOR INITIALIZING LOGICAL OBJECTS IN A
DATA STORAGE SYSTEM
Examiner: Yamir Encarnacion
Art Unit: 2185

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The undersigned hereby certifies that this document is being placed in the United States mail with first-class postage attached, addressed to the Commissioner for Patents, Washington, D.C. 20231 on June 12, 2002.

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Sir:

RESPONSE

In response to the Office Action mailed March 12, 2002, Applicants respectfully request reconsideration in light of the following remarks.

Claims 1-22 are pending in this application. Claims 1-3, 10, 12-14, and 22 stand rejected under 35 U.S.C. §102(e) as being anticipated by Rao (U.S. Patent No. 5,920,733), or in the alternative, obvious under 35 U.S.C. §103(a) in view of Rao. Claims 4-9, 11, and 15-21 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Rao further in view of U.S. Patent No. 6,145,028 to Shank (hereinafter Shank). This rejection is respectfully traversed.

Initially, the undersigned thanks Examiner Encarnacion for the courtesies extended to him during the telephone interview of June 11, 2002. The substance of this interview is summarized below.

During the telephone interview, the undersigned discussed the rejection of the claims over Rao. The undersigned pointed out that in Applicants' response mailed October 31, 2001,

and in response to the Examiner's concern as to whether the claims distinguished over a conventional disk formatting command, each of independent claims 1, 11, 12, 21, and 22 were amended. Specifically, each of these claims was amended to clarify that the storage locations to which generated data is to be written are "user-accessible storage locations." This is in contrast to conventional disk formatting commands in which the locations to which formatting data is written are not accessible to a user. With specific reference to Rao, although Rao discloses at column 9, lines 35-45 that the formatting may be a low level formatting, or a high level or logical formatting, the undersigned pointed out that each of independent claims 1, 11, 12, 21, and 22 patentably distinguish over both types of formatting. Specifically, both low-level and high-level formatting of a disk results in changes to storage locations on a disk that are not "user-accessible."

The undersigned also pointed out that in a prior response, mailed April 25, 2001, and in response to the Examiner's concern as to whether the then pending independent claims distinguished over conventional compression and decompression techniques, each of the then pending independent claims was also amended to allay the Examiner's concern. Specifically, each of independent claims 1, 12, and 22 was amended to recite that generated data that is written is "independent of any data passed from the host computer to the storage system." Although this amendment was primarily directed to distinguishing embodiments of Applicants' invention from conventional compression and decompression techniques, this amendment also patentably distinguishes over conventional format conversion utilities, such as those implemented within a peripheral controller as described in Rao. Specifically, in both compression/decompression and in format conversion, the data that is ultimately written to the storage locations is necessarily related to, and not independent of, the data that is passed from the host computer to the storage system.

Despite these amendments, the Examiner also expressed concern regarding Applicants' assertion (page 8, Applicants' Response mailed October 31, 2001) that claims 1, 11, 12, 21, and 22 may also be read on the transformation operation described at page 26 lines 25-30 of Applicants' specification. Although no conclusion was reached during the interview, the

undersigned agreed to review the October 31, 2001 response and address the Examiner's concerns.

As now presented, each of independent claims 1, 11, 12, 21, and 22 is believed to patentably distinguish over Rao alone and in combination with Shank. Specifically, each of independent claims 1, 11, 12, 21, and 22 recites that the storage locations to which generated data is to be written are "user-accessible storage locations." This is in contrast to conventional disk formatting commands, including the low-level and high-level formatting that is performed within the peripheral controller of Rao. For example, as evidenced by the enclosed copy of information printed from the PC Guide Website, both low-level formatting commands and high-level formatting commands modify storage locations that are not accessible to a user. As described therein, low level formatting is a "process of outlining the positions of the tracks and sectors on the hard disk, and writing control structures that define where the tracks and sectors are," whereas high level formatting is a "process of writing the file systems structures on the disk that let the disk be used for storing programs and data." (See "<http://www.pcguid.com/ref/hdd/geom/formatLow-c.html>" and "/formatHigh-c.html".) As described therein, a high level format is accomplished by "wiping out the control structures and writing new ones" in which "[m]uch of the old data is still present on the disk, but the access paths to it have been wiped out."

Claims 1, 11, 12, 21, and 22 also patentably distinguish over the other utility programs or algorithms that are capable of being performed by the peripheral controller of Rao. For example, although Rao discloses compression and decompression algorithms (col. 6, lines 24-29), format conversion algorithms (to convert from a IBM compatible DOS to a Macintosh format and vice versa; col. 6, lines 30-57), a disk error correction utility (that backs up the file allocation structure, col. 6, lines 60-64), and an automated back-up utility (col. 6, line 65 – col. 7, line 2) that may be performed by the peripheral controller, each of these algorithms or utilities necessarily stores data that is intimately related to data that is passed from the host computer, and not data that is generated "independent of any data passed from the host computer to the storage system." Accordingly, because each of claims 1, 11, 12, 21, and 22 recites that the data that is generated and written to the first user-accessible storage location is "independent of any data that